



SIMATIC S7-400, digital input SM 421, isolated 16 DI; UC 24 - 60 V, alarm, diagnostics

Input current	
from backplane bus 5 V DC, max.	150 mA
Power loss	
Power loss, typ.	8 W; 3.5 W (24 V DC); 6.5 W (48 V DC); 8.0 W (60 V DC)
Digital inputs	
Number of digital inputs	16
Number of simultaneously controllable inputs	
• Number of simultaneously controllable inputs	16
Input voltage	
• Type of input voltage	AC/DC
• Rated value (UC)	24 V; 24 V UC to 60 V UC (47 ... 63 Hz)
• for signal "0"	-6 to +6 V DC/ 0 to 5 V AC
• for signal "1"	15 to 72 V DC; -15 to -72 V DC; 15 to 60 V AC
Input current	
• for signal "1", typ.	4 mA; 4 to 10 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	Yes
— Rated value	0.5 ms; 0.5 / 3 / 10 / 20 ms
Encoder connection	
• Fixed current limitation for wire-break monitoring, min.	18 kΩ; 18 kohms: Rated voltage 24 V (15 to 35 V); 39 kohms: Rated voltage 48 V (30 to 60 V)
• Fixed current limitation for wire-break monitoring, max.	56 kΩ; Rated voltage 60 V (50 to 72 V)
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m; 600 m: 3, 10, 20 ms; 100 m: 0,5 ms
Encoder	
Connectable encoders	
• 2-wire sensor	Yes
— permissible quiescent current (2-wire sensor), max.	0.5 mA; 0.5 to 2 mA
Interrupts/diagnostics/status information	
Diagnostics function	Yes; Parameterizable
Alarms	
• Diagnostic alarm	Yes; Parameterizable
• Hardware interrupt	Yes; Parameterizable
Diagnoses	
• Diagnostic information readable	Yes; possible
• Wire-break	Yes; I > 0.7 mA
Diagnostics indication LED	
• Status indicator digital input (green)	Yes

• Channel fault indicator F (red)		No	
Potential separation			
Potential separation digital inputs			
• between the channels		Yes	
• between the channels, in groups of		1	
• between the channels and backplane bus		Yes	
Isolation			
Isolation tested with		1 500 V AC	
Dimensions			
Width		25 mm	
Height		290 mm	
Depth		210 mm	
Weights			
Weight, approx.		600 g	
Classifications			
		Version	Classification
eClass		14	27-24-22-04
eClass		12	27-24-22-04
eClass		9.1	27-24-22-04
eClass		9	27-24-22-04
eClass		8	27-24-22-04
eClass		7.1	27-24-22-04
eClass		6	27-24-22-04
ETIM		9	EC001419
ETIM		8	EC001419
ETIM		7	EC001419
IDEA		4	3566
UNSPSC		15	32-15-17-05
Approvals / Certificates			
General Product Approval			
 EG-Konf.			 UL
Miscellaneous		 KC	 RCM
EMV		For use in hazardous locations	
 RCM	 RCM	 IECEX	 ATEX
		 FM	 CCC
For use in hazardous locations		Marine / Shipping	
 IECEX	Type Examination Certificate	 ATEX	 ABS
		 BUREAU VERITAS	 DNV
Marine / Shipping			
 LRS	NK / Nippon Kaiji Kyokai	 PRS	 RINA
		 RMRS	CCS (China Classification Society)

